

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
SHERMAN DIVISION**

INNOVATION SCIENCES, LLC,

Plaintiff,

v.

AMAZON.COM, INC., ET AL.,

Defendants.

Civil Action No.4:18-cv-00474-ALM

JURY TRIAL DEMANDED

**INNOVATION'S RULE 50(B) MOTION FOR JUDGMENT AS A MATTER OF LAW,
OR ALTERNATIVELY, RULE 59(A) MOTION FOR A NEW TRIAL**

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Plaintiff Innovation Sciences, LLC (“Innovation”), pursuant to Federal Rule of Civil Procedure 50(b), hereby files its renewed motion for judgment as a matter of law. Alternatively, Innovation moves for a new trial under Federal Rule of Civil Procedure 59(a).

I. INTRODUCTION

Innovation respectfully requests that the Court enter judgment as a matter of law that Defendants Amazon.com, Inc., Amazon Web Services, Inc. (collectively, “Amazon”) did not prove the asserted claims from the patents-in-suit to be invalid, or patent ineligible. Innovation also asks the Court to enter judgment as a matter of law that Innovation proved that Amazon’s accused products infringe each of the asserted claims. The asserted claims of the patents-in-suit are claims 22, 24, 39, 62, 64, 67, 80, 105 and 108 of U.S. Patent No. 9,912,983 (“the ‘983 patent”), claim 28 of U.S. Patent No. 9,729,918 (“the ‘918 patent”), and claims 5, 6, and 52 of U.S. Patent No. 9,942,798 (“the ‘798 patent”). *See* Exs. 1-3. The Amazon accused products are defined in the Joint Final Pretrial Order. *See* Dkt. 803 at 8. Innovation also asks that the Court enter judgment that the Amazon defendants include Amazon Digital Service, Inc., Amazon Digital Services, LLC, Amazon Web Services LLC, and Amazon Fulfillment Services, Inc.

II. LEGAL STANDARDS

A. Renewed Motion for Judgment as a Matter of Law

“A motion for judgment as a matter of law [under Rule 50(b)] is a challenge to the legal sufficiency of the evidence supporting the jury's verdict.” *Core Wireless Licensing S.a.r.l. v. LG Electronics, Inc.*, 2018 WL 7199139, at *1–2 (E.D. Tex. 2018) (Gilstrap, C. J.) (citing *Erfindergemeinschaft UroPep GbR v. Eli Lilly & Co.*, 276 F. Supp. 3d 629, 643 (E.D. Tex. 2017)). “Entry of judgment as a matter of law is therefore only appropriate when ‘there is no legally sufficient evidentiary basis for a reasonable jury to find as the jury did.’” *Id.* (citing *Guile v. United States*, 422 F.3d 221, 225 (5th Cir. 2005); *see also Baisden v. I’m Ready Prods., Inc.*, 693 F.3d 491, 498 (5th Cir. 2012) (“A district court must deny a motion for judgment as a matter of law unless the facts and inferences point so strongly and overwhelmingly in the movant's favor that reasonable jurors could not reach a contrary conclusion.”)).

“In evaluating a motion for judgment as a matter of law, a court must ‘draw all reasonable inferences in the light most favorable to the verdict.’” *Id.* (citing *Metaswitch Networks Ltd. v. Genband US LLC*, 2017 WL 3704760 at *2 (E.D. Tex. 2017) (quoting *E.E.O.C. v. Boh Bros. Const. Co., L.L.C.*, 731 F.3d 444, 451 (5th Cir. 2013)). “Courts must also avoid the temptation of revisiting credibility determinations or reweighing evidence.” *Id.* (citing *Metaswitch*, 2017 WL 3704760 at *2). “Such determinations are, appropriately, left to the jury.” *Id.* (citing *Montano v. Orange Cty., Texas*, 842 F.3d 865, 874 (5th Cir. 2016) (“[I]t is for the jury alone to judge the credibility of witnesses and weigh the evidence.”)).

B. Motion for New Trial

Rule 59 provides that a motion for new trial may be granted on all or part of the issues on which there has been a trial by jury for “any reason for which a new trial has heretofore been granted in an action at law in federal court.” Fed. R. Civ. P. 59(a). “Notwithstanding the broad sweep of Rule 59, ‘courts do not grant new trials unless it is reasonably clear that prejudicial error has crept into the record or that substantial justice has not been done, and the burden of showing harmful error rests on the party seeking the new trial.’” *Id.* (citing *Metaswitch* at *2). “A new trial may be granted, for example, if the district court finds the verdict is against the weight of the evidence, the damages awarded are excessive, the trial was unfair, or prejudicial error was committed in its course.” *Id.* (citing *Smith v. Transworld Drilling Co.*, 773 F.2d 610, 612–13 (5th Cir. 1985)).

III. THE COURT SHOULD ENTER JUDGEMENT AS A MATTER OF LAW THAT THE PATENTS WERE NOT PROVEN INVALID

Issued patents are presumed valid under 35 U.S.C. § 282, and defendants must demonstrate by clear and convincing evidence that the claims at issue are invalid for lack of written description. *See Laryngeal Mask Co. Ltd. v. Ambu*, 618 F.3d 1367, 1374 (Fed. Cir. 2010). Defendants must prove lack of written description separately for each asserted claim. *Vas-Cath v. Mahurkar*, 935 F.2d 1555, 1567 (Fed. Cir. 1991). To invalidate a claim for lack of written description, a defendant must prove by clear and convincing evidence that specific claim

elements are not explicitly or inherently disclosed in the patent specification. *Motio Inc. v. BSP Software LLC*, Civ. A. No. 4:12-cv-647, 2015 WL 9308315, *3 (E.D. Tex. Dec. 22, 2015).

Giving Amazon a generous read of the record, Amazon presented two bases for the jury to find the patents-in-suit invalid.¹ First, Amazon argued that the patents were invalid for failure to satisfy the written description requirement of 35 U.S.C. § 112, first paragraph. This argument was based on the idea that the asserted claims were not properly supported by the August 10, 2006 patent application to which the patents-in-suit claim priority. Second, Amazon argued that the asserted claims were anticipated or rendered obvious by the HAL System. Amazon only argued obviousness with respect to claim 39 of the '983 patent and claim 6 of the '798 patent because those claims explicitly recite Zigbee, which the HAL System did not disclose.

None of Amazon's invalidity theories were supported by proper evidence and/or the law. As explained below, Amazon's written description theory was based on an incorrect legal theory. The written description requirement is evaluated by comparing the claims to the specification of which they are part – not a prior-filed patent application. Amazon's prior art invalidity arguments were not supported by sufficient and/or proper evidence. Amazon's technical expert, Dr. Johnson, frequently omitted claim elements and phrases from his explanation of allegedly why the prior art disclosed those elements and phrases. Thus, the jury had no evidence by which they could conclude that the claims were disclosed by the prior art. In some cases, Dr. Johnson improperly relied upon demonstrative videos for the substantive proof that certain claim elements were disclosed by the prior art. It is black-letter law that demonstratives are not in evidence and cannot supply substantive proof.

Consequently, the Court should enter judgment as a matter of law that Amazon failed to prove any of the asserted claims were invalid.

¹ Innovation deals with Amazon's patent ineligibility contentions in a separate section of this motion.

A. Amazon Failed to Establish that the Patents-In-Suit Were Invalid Under 35 U.S.C. § 112, ¶ 1, for Lack of Written Description

1. The Jury Instruction Incorrectly Stated the Standard for Failure to Satisfy the Written Description Requirement

At Amazon's insistence and over Innovation's objection, the Court incorrectly instructed the jury regarding the standard for finding claims invalid for failure to comply with the written description requirement of 35 U.S.C. § 112, first paragraph. *See* Ex. 14 at 200-201 [9/2 AM transcript]. The relevant part of the written description jury instruction read:

The written description requirement is designed to ensure that the inventor was in possession of the full scope of the claimed invention *as of the patent's effective filing date*. Amazon contends that claim(s) of Innovation Sciences' patents are invalid because their shared specification does not show by clear and convincing evidence that a person having ordinary skill in the field reading the patent specification *as of the patents' effective filing date*, which in this case is either August 10, 2006 (Application No. 11/501,747) or February 2, 2007 (Provisional Application No. 60/899,037), would not have recognized that it describes the full scope of the invention as it is finally claimed in the asserted claims of the asserted patents. If a patent claim lacks adequate written description, it is invalid.

Dkt. 845 at 23 (emphasis added). Based on this instruction, the jury could not have properly concluded that the asserted claims failed to satisfy the written description requirement, and thus, were invalid.

The case of *Reiffin v. Microsoft Corp.*, 214 F.3d 1342 (Fed. Cir. 2000), is remarkably similar to the present case. In *Reiffin*, the patent owner filed his original patent application in 1982. *Id.* at 1344. He filed a continuation of the first application in 1985. *Id.* He filed another continuing application with additional text and modified claims in 1990. *Id.* The 1990 application issued as the '603 patent, which was one of the patents-in-suit. *Id.* In 1994, the patent owner filed a continuation of the 1990 application. That 1994 continuation application issued as the '604 patent, which was the second patent-in-suit. *Id.*

The district court granted Microsoft's summary judgment motion that the '603 and '604 patents were invalid for failure to comply with the written description requirement. *Id.* at 1345. The district court reached that conclusion by comparing the claims of the '603 and '604 patents

to the original 1982 application. *Id.* On appeal, the Federal Circuit held that it was reversible error to look to the 1982 application to determine whether the patents-in-suit satisfied the written description requirement. *Id.* (“We conclude that the district court erred in looking to the text of the original 1982 application to determine whether the ‘603 and ‘604 patents, filed in 1990 and 1994, comply with the written description requirement.”). According to the court, “[f]or purposes of § 112, ¶ 1, the relevant specifications are those of the ‘603 and ‘604 patents; earlier specifications are relevant only when the benefit of an earlier filing date is sought under 35 U.S.C. § 120.” *Id.*

The district court did not decide whether the claims of the ‘603 and ‘604 patents are adequately supported by the written descriptions of the inventions set forth in the specifications of those patents. However, *that is all that is required for compliance with the written description requirement of § 112 ¶ 1*, which states the basic requirements for the content of the specification.

Id. (emphasis added).

The court further explained the relationship between the written description requirement of § 112, ¶ 1, and the ability to seek the benefit of an earlier filing date under 35 U.S.C. § 120.

Although § 120 incorporates the requirements of § 112 ¶ 1, these requirements and the statutory mechanism allowing the benefit of an earlier filing date are separate provisions with distinct consequences. *In accordance with § 120, claims to subject matter in a later-filed application not supported by an ancestor application in terms of § 112 ¶ 1 are not invalidated; they simply do not receive the benefit of the earlier application’s filing date.*

Id. at 1346 (emphasis added). Claims that are not supported by an earlier filed application are not invalid – they simply do not receive the benefit of the earlier filing date.

Here, Amazon successfully pulled the wool over the Court’s eyes. The jury was incorrectly instructed that Innovation’s patents-in-suit were invalid because the asserted claims were not supported by the “specification as of the patents’ effective filing date, which in this case is either August 10, 2006 ... or February 2, 2007” Dkt. 845 at 23. The jury should have been instructed to determine if the specifications of the patents-in-suit (*i.e.*, the ‘983, ‘798 and ‘918 patents) adequately described the asserted claims. *Reiffin*, 214 F.3d at 1345. It was error

for the jury to be instructed to compare the asserted claims to either the August 10, 2006 application or the February 2, 2007 application instead of the specifications of the patents-in-suit.

In the end, it was utterly irrelevant whether Innovation's patents-in-suit were entitled to either the 2006 or the 2007 filing dates. Amazon did not rely on any intervening prior art in its assertion that the prior art rendered Innovation's patents invalid under either 35 U.S.C. §§ 102 (anticipation) or 103 (obviousness). All prior art Amazon relied upon at trial allegedly was dated before August 10, 2006. Thus, it did not matter whether Innovation's patents were entitled to the filing date of either the 2006 or 2007 applications. *See Tronzo v. Biomet, Inc.*, 156 F.3d 1154, 1158 (Fed. Cir. 1998) (holding that claims were not entitled to benefit of earlier filing date and invalidating claims based on intervening prior art).

Here, the undisputed testimony was that the asserted claims of the patents-in-suit were supported by the specifications of the patents-in-suit. *See* Ex. 13 at 81-82 [9/1 PM transcript]. No properly-instructed, reasonable jury could have found Innovation's asserted patent claims invalid for failure to satisfy the written description requirement.

2. Amazon Provided No Evidence that the Asserted Claims are not Supported by the February 2, 2007 Specification

Even if the written description requirement required a comparison between the asserted claims and the earlier-filed application (which it does not), failure to satisfy the written description requirement could not be a proper basis for the jury to have found the asserted claims invalid. The jury was instructed in part that:

Amazon contends that claim(s) of Innovation Sciences' patents are invalid because their shared specification does not show by clear and convincing evidence that a person having ordinary skill in the field reading the patent specification *as of the patents' effective filing date, which in this case is either August 10, 2006 (Application No. 11/501,747) or February 2, 2007 (Provisional Application No. 60/899,037)*, would not have recognized that it describes the full scope of the invention as it is finally claimed in the asserted claims of the asserted patents. If a patent claim lacks adequate written description, it is invalid.

Dkt. 845 at 23 (emphasis added).

Dr. Johnson failed to provide any evidence that Dr. Anne Wong's U.S. provisional application no. 60/899,037 filed February 2, 2007 lacked written description support for the asserted claims. Ex. 10 at 72-81 [8/31 AM testimony]. That application was not introduced as an exhibit and no witness testified as to the contents of that disclosure. Given the absence of any evidence, it was impossible for Amazon to carry its burden of establishing that the asserted claims lacked written description support in U.S. provisional application no. 60/899,037 filed February 2, 2007. As instructed, Amazon had to prove that neither of the two applications identified in the jury instruction supported the asserted patent claims. Since there was a complete absence of evidence with respect to the '037 application, Amazon could not establish that the asserted claims failed to satisfy the written description requirement under the erroneous standard articulated in the jury instructions. Thus, even assuming the jury instruction was correct (it was not), no reasonable jury could have concluded that the asserted claims failed to satisfy the written description requirement.

3. Failure to Satisfy the Written Description Requirement Should Not Have Been Presented to the Jury Because Amazon Stipulated to the Priority Date

Evidence regarding whether the asserted claims of the patents-in-suit were supported by the August 10, 2006 patent application should not have been presented to the jury at all. Amazon stipulated that the priority date of the asserted claims was August 10, 2006. Dkt. 845 at 7. Moreover, the jury was instructed that it "must accept a stipulated fact as evidence and treat that fact as having been proven here in court." Dkt. 845 at 5. Specifically, Amazon stipulated that "[t]he priority date of the '983 patent, '798 patent, and '918 patent is August 10, 2006." Dkt. 845 at 7. That should have ended the issue and cut off any need to present evidence about the August 10, 2006 application. But, as explained above, even if the patents-in-suit were not entitled to the earlier priority date, that fact would not render the patents invalid.²

² Amazon never presented any evidence regarding Provisional Patent Application No. 60/899,037 filed on February 2, 2007. *See* Ex. 10 at 72-81 [8/31 AM Testimony]; and Dkt. 845 at 23.

B. Amazon Did Not Present Substantial Evidence that the Asserted Claims were Invalid Under 35 U.S.C. §§ 102 or 103

The only prior art references relied upon by Amazon to show invalidity under 35 U.S.C. §§ 102 or 103 were the HAL System described by Amazon's technical expert, Dr. Johnson, and the Zigbee communication protocol specification. *See generally* Ex. 11 at 67-98 [8/31 PM transcript]. Indeed, Amazon only relied upon the Zigbee specification for dependent claim 39 from the '983 patent and dependent claim 6 from the '798 patent because those claims explicitly recite Zigbee and Dr. Johnson admitted that the HAL System did not disclose Zigbee. *See* Ex. 11 at 80-81 and 97 [8/31 PM transcript].

Importantly, Dr. Johnson made it clear that he relied upon a physical system that he referred to as the HAL System as the prior art supporting his invalidity opinions. *See* Ex. 11 at 110 [8/31 PM transcript].³ Except for dependent claim 39 from the '983 patent and dependent claim 6 from the '798 patent, Dr. Johnson testified that every claim was anticipated by the HAL System. As such, Amazon bore the burden of proof that the HAL System disclosed each and every element of the asserted claims by clear and convincing evidence. *See Invitrogen Corp. v. Biocrest Mfg., L.P.*, 424 F.3d 1374, 1378 (Fed. Cir. 2005) ("Overcoming the presumption [of validity] requires a showing of facts proved by clear and convincing evidence."); *Crown Operations Int'l, Ltd. v. Solutia Inc.*, 289 F.3d 1367, 1377-78 (Fed. Cir. 2002); *Eli Lilly and Co. v. Barr Laboratories, Inc.*, 251 F.3d 955, 962 (Fed. Cir. 2001).

To prevail, Amazon was required to present substantial evidence to the jury that (a) the HAL System qualified as prior art, and (b) that the HAL System disclosed each and every

³ Dr. Johnson also referred to certain videos as supplementing his understanding of the HAL System. *See* Ex. 11 at 108 [8/31 PM transcript]. But those videos were for demonstrative purposes only, and thus, cannot provide substantive evidence of how the HAL System was constructed or operated. *See* Ex. 10 at 3-14 and 85-86 [8/31 AM transcript]. As such, the jury was not permitted to rely upon the demonstrative videos for substantive evidence of invalidity. *See U.S. v. Taylor*, 210 F.3d 311, 315 (5th Cir. 2000) (demonstratives "are not admitted into evidence and should not go to the jury room absent consent of the parties"); *Reedhycalog UK, Ltd. v. Diamond Innovations Inc.*, 210 WL 11442115, *1 (E.D. Tex. Aug. 12, 2010) (same); *Stoker v. Stemco, LP*, 2013 WL 3786346, *4 (E.D. Tex. Jul. 17, 2013) ("By definition, demonstratives are never a part of the record.").

element of the asserted claims (except dependent claim 39 from the ‘983 patent and dependent claim 6 from the ‘798 patent). Moreover, Amazon was required to present *clear and convincing evidence* that the HAL System was prior art and that it disclosed the claim elements. Amazon failed to present clear and convincing evidence that the HAL System qualified as prior art. Amazon also failed to present clear and convincing evidence that the HAL System disclosed each element of the asserted claims.

1. No Invalidity Based on the Alleged HAL System Prior Art

i. Amazon Did Not Present Substantial Evidence that the HAL System Actually Existed During the Prior Art Time Period

Amazon did not present substantial evidence that the HAL System actually existed prior to August 2006 – the stipulated priority date of the patents-in-suit. In order for something to qualify as prior art, it must be “described in a printed publication, or in public use, on sale, or otherwise available to the public . . .” 35 U.S.C. § 102. To be publicly known is defined by the Federal Circuit to mean “knowledge or use which is accessible to the public.” *Carella v. Starlight Archery and Pro Line Co.*, 804 F.2d 135, 139 (Fed. Cir. 1986). It was Amazon’s burden to show that the so-called HAL System is prior art. *Equistar Chems., LP v. Westlake Chem. Corp.*, Civ. A. No. 6:14CV68, 2016 WL 4410049 at *2 (E.D. Tex. Feb. 26, 2016) (“To invalidate patent claims based on prior art, the challenger to the patent must show by clear and convincing evidence that the earlier invention is prior art under § 102 and the earlier invention includes all elements of the claims at issue”); *see also Nobelpharma AB v. Implant Innovations, Inc.*, 141 F.3d 1059, 1065 (Fed. Cir. 1998) (“burden is on an accused infringer to show by clear and convincing evidence facts supporting the conclusion that the patent is invalid”).

The HAL System Dr. Johnson relied on in his trial testimony is a system that was originally built by Mr. Tim Shriver in 2019. *See* Ex. 11 at 111 [8/31 PM transcript]. Mr. Shriver assembled the system at the request of attorneys, who provided Mr. Shriver with a set of requirements based on the asserted claim language and discussed implementation. *See* Ex. 10 at 50-52 and 56 [8/31 AM transcript]; Ex. 11 at 112-113 [8/31 PM transcript]; Ex. 12 at 23 [9/1

AM transcript]. Mr. Shriver found what he could, bought some new equipment, looked for drivers that were hard to find, and shipped boxes of things off to the attorneys. *See* Ex. 10 at 51-53 and 56 [8/31 AM transcript]. Amazon contends that because the individual components of the 2019 HAL System are purportedly from 2006 or earlier, it is a system that necessarily existed in that time frame (which it would need to be in order to qualify as prior art).

To the contrary, Mr. Shriver testified that each customer's HAL System is so unique that it's like a snowflake. *See* Ex. 10 at 53-54 [8/31 AM transcript]. Mr. Shriver also testified that he would not know whether a customer would have set up a system like the HAL System tested by Dr. Johnson before August 2006.

Q. So, you wouldn't know whether a customer would have set up a system like this on August 9th of 2006.

A. No.

See Ex. 10 at 55-56 [8/31 AM transcript].

Dr. Johnson, who acknowledges that Mr. Shriver was the most knowledgeable person about the HAL System, also testified that he does not know whether any customer actually had a system like the one assembled in 2019. *See* Ex. 11 at 115, 144 [8/31 PM transcript]. Moreover, Mr. Shriver also testified that his company did not sell "turnkey systems" prior to the critical date. That only began at a later time:

Q. · Right. · So as far as you know, you don't know if any customer's ever been shipped the system that looks like this system?

A. · We don't -- in that time · frame, we weren't selling turnkey systems, so we wouldn't sell a turnkey system. · We would sell the software and the customer would configure it. · It wasn't until later that we started selling turnkey systems preconfigured.

See Ex. 10 at 54 [8/31 AM transcript].

The inability of Mr. Shriver and Dr. Johnson to confirm that the HAL System tested by Dr. Johnson was in fact sold or used by August 2006 is fatal to Amazon's position. Amazon

failed to present clear and convincing evidence that the HAL System actually existed prior to the August 2006 stipulated priority date. At most, Amazon presented some evidence (not clear and convincing evidence) that the HAL System relied upon by Amazon *possibly* could have existed. It is rank speculation that a HAL System like the one Dr. Johnson tested and demonstrated to allegedly teach the elements of the asserted claims existed prior to August 2006.

Dr. Johnson even admitted that he altered the HAL System in 2019 by editing a rule dictating how the HAL System responded to the detection of motion by the X10 camera and some of the IP addresses dictating how messages were routed through the system. *See* Ex. 11 at 80 and 125-126 [8/31 PM transcript]. These changes reinforce the fact that the actual system relied upon by Dr. Johnson did not exist until he did his testing and analysis of that system in 2019.

No reasonable jury could have concluded that Amazon presented clear and convincing evidence that the HAL System was prior art. Instead, the jury verdict was based on speculation and conjecture about what system might have existed. *See Anthony v. Chevron USA, Inc.*, 284 F.3d 578, 584 (5th Cir. 2002). Accordingly, the Court should enter judgment as a matter of law of no invalidity based on the HAL System.

ii. Amazon Has Not Presented Substantial Evidence that the HAL System Anticipates or Renders Obvious Each And Every Element of the Asserted Claims

As established above, there is no evidence that a HAL System like the one tested and relied on by Dr. Johnson existed prior to August 2006. Amazon has, however, put forth evidence that a portion of that larger system, the HAL2000 software, was in fact publicly available and sold prior to that date. *See* Ex. 10 at 54 [8/31 AM transcript] (“We don't -- in that time frame, we weren't selling turnkey systems, so we wouldn't sell a turnkey system. We would sell the software and the customer would configure it.”). In fact, at one point, Dr. Johnson expressly testified that it was his opinion that the HAL2000 software – not the HAL System – invalidated all asserted claims. *See* Ex. 11 at 67-68 [8/31 PM transcript]. Because the HAL2000 software is

the only thing established as being sold prior to August 2006, and because Amazon claims that the HAL System anticipates the asserted claims, the HAL2000 software by itself must meet each and every claim element.

But the HAL2000 software indisputably does not include each claim element. For example, Dr. Johnson testified that the interfaces required by the asserted claims are not found in the HAL2000 software. Rather, they are part of the PC on which the software is running:

- Q. Go to the next two elements that we've been discussing, these two interfaces, input interface and a network interface. Does the HAL System running on a personal computer include those two interfaces?
- A. Yes, both of them. The computer as set up has a WiFi interface on it as well as a wired Ethernet interface on it. The WiFi interface serves as the input interface as required by the claims, and the wired Ethernet interface serves as the network interface as required by the claims.

See Ex. 11 at 69 [8/31 PM transcript]. In light of this testimony, and because each of the asserted claims includes an interface of some variety, the HAL2000 software cannot by itself anticipate any of the asserted claims.

Even if we assume that the HAL System relied upon by Dr. Johnson existed during the prior art time period (it did not exist), Amazon still failed to present clear and convincing evidence of invalidity. Dr. Johnson was Amazon's only witness to opine on invalidity. But in his testimony, Dr. Johnson omitted various claim elements and limitations when he testified that the HAL System rendered the claims invalid. For example, with respect to claim 22 of the '983 patent, Dr. Johnson never explained what corresponded to the "information for managing an item status of an item." *See* Ex. 1 at col. 44:34-35 ['983 patent]. Dr. Johnson testified that the "computer running HAL2000 communicates through the network communication channel information for managing that item status." *See* Ex. 11 at 75 [8/31 PM transcript]. But Dr. Johnson never explained what the claimed "information for managing an item status of an item" was in the HAL System. The jury had not basis to conclude that that feature of claim 22 was

satisfied by the HAL System.

Similarly, Dr. Johnson never identified where the HAL System disclosed the claimed “decoder.” In claim 22, the “decoder is configured to decompress the compress signal.” Ex. 1 at 44:30-31 [‘983 patent]. All Dr. Johnson said was that decompression occurs, but did not identify what performed the decompression. *See* Ex. 11 at 70-71 [8/31 PM transcript] (“So, in the lower right corner o the diagram here is a WiFi camera which was connected to a HAL2000 system as I inspected it and tested it. ... HAL2000 decompresses those and can display them on the screen. If HAL2000 was not able to decompress it, then it would also not be able to display it”) (emphasis added). But just pointing to the HAL2000 system generally and saying a decoder is somewhere in there is not clear and convincing evidence of what the decoder is and that it is in fact performing the claimed decoding function.

For claim 62 of the ‘983 patent, Dr. Johnson only testified about the differences in claim language as compared to claim 22. Claim 62 has the same “information for managing an item status of an item” and “decoder is configured to decompress the compress signal” language found in claim 22. Ex. 1, compare 44:30-35 with 48:7-12 [‘983 patent]. Dr. Johnson provided no testimony on that language when he analyzed claim 62. Instead, he relied upon his own deficient testimony regarding claim 22. *See* Ex. 11 at 79-80 [8/31 PM transcript].

Claim 64 of the ‘983 patent requires the “wireless HUB system” to be configured to communicate information about the updated status “to a cellular phone.” Ex. 1 at 48:22-24 [‘983 patent]. But Dr. Johnson admitted that the HAL System he relied upon did not communicate “to a cellular phone.” He said he could have altered the system to communicate with his cell phone, but the system as tested did not. *See* Ex. 11 at 82-83 [8/31 PM transcript].

Claim 67 of the ‘983 patent requires an “encoder” that is “configured to encode the decompressed signal to an encoded signal.” Ex. 1 at 48:40-42 [‘983 patent]. But Dr. Johnson never identified the encoder in the HAL System. *See* Ex. 11 at 83-85 [8/31 PM transcript].

Claim 80 of the ‘983 patent requires the wireless HUB system to be configured to “receive an instruction of making a call to a cellular phone and communicate a data from the

cellular phone to accommodate the call.” Ex. 1 at 49:40-43 [‘983 patent]. For this claim, Dr. Johnson improperly relied upon one of the demonstrative videos as substantive evidence.

Q. And is this one of the things we saw in one of the videos earlier where someone was calling the HAL System?

A. Yes. We saw many examples of that in the – in the videos for HAL2000 we’ve seen.

Ex. 11 at 85-86 [8/31 PM transcript] (emphasis added). First, it was improper to rely on the demonstrative videos as substantive evidence. *See Taylor*, 210 F.3d at 315 (demonstratives “are not admitted into evidence and should not go to the jury room absent consent of the parties”). Second, the claim requires the wireless HUB system to make a call, but Dr. Johnson relied on the video showing the HAL System receiving a call.

Independent claim 86 of the ‘983 patent requires “a mapping table including information of a network address of a WiFi network and information of a unique identifier of a first mobile terminal.” Ex. 1 at 50:4-6 [‘983 patent]. Dr. Johnson did not identify the “first mobile terminal” in the HAL System. *See* Ex. 11 at 86-87 [8/31 PM transcript]. Instead, he referred to “connected devices.” But a “connected device” is not necessarily a “first mobile terminal.” The X10 cameras Dr. Johnson discussed during his testimony are not “mobile terminals,” for example.

For “Elements C and D” of claim 86, Dr. Johnson again improperly relies on the demonstrative videos as substantive evidence. When asked how those claim elements were used in the HAL System, Dr. Johnson simply replied “[t]hese were shown in the videos.” *See* Ex. 11 at 87-88 [8/31 PM transcript]. Dr. Johnson also stated that the HAL System can make phone calls. *Id.* at 88. But he never provided any evidence to support his assertion because there was none.

Claim 86 also requires that “a data from the first mobile terminal and from a cellular network being converted to a converted data for transmission through the WiFi network.” Ex. 1 at 50:10-12 [‘983 patent]. Dr. Johnson provided no evidence that such a conversion occurs in the HAL System. Instead, he recites the claim language in an entirely conclusory fashion.

- A. Sure. These were shown in the videos, the manage center system. Again, the computer running HAL2000 system is configured to communicate a phone call with the first mobile – with the first mobile terminal, a data from the first mobile terminal and from a cellular network being converted to a converted data for transmission through the WiFi network and wherein the management center system is configured to transmit the converted data through the WiFi network to accommodate the phone call.

Ex. 11 at 87-88 [8/31 PM transcript] (emphasis added). Everything underlined in the above quote is verbatim claim language. None of that is evidence that the HAL System disclosed that claim language.

With the next two elements of claim 86, Dr. Johnson again improperly relies on the demonstrative videos as substantive evidence. *See* Ex. 11 at 88 [8/31 PM transcript] (“So, we saw in the video HomeNet as one example of this.”). The videos were not admitted into evidence because they were demonstrative only.

Dr. Johnson also provided no testimony or evidence regarding the element of claim 86 that reads “wherein the management center system is configured to transmit a signal corresponding to [the] information content.” *See* Ex. 11 at 88 [8/31 PM transcript]. He simply skipped over that element.

For dependent claims 103 and 105, Dr. Johnson essentially just paraphrased the claim language and offered no underlying evidence to support his conclusions. *See* Ex. 11 at 89-90 [8/31 PM transcript].

For dependent claim 108 of the ‘983 patent, Dr. Johnson never mentioned two elements of that claim. Dr. Johnson provided no evidence about whether the HAL System disclosed “wherein the short range wireless communication is initiated by a detection of the updated status; and wherein the short range wireless communication comprises information for a unique identifier associated with the item.” *See* Ex. 11 at 90-91 [8/31 PM transcript]. Again, Dr. Johnson simply skipped over these elements.

For claim 9 of the ‘918 patent, Dr. Johnson did not identify the portion of the HAL System that allegedly corresponded to the “input interface” configured to receive the multimedia

signal through “a wireless communication network.” *See* Ex. 11 at 91-92 [8/31 PM transcript]. He only identified what he claimed to correspond to the “multimedia signal.” *Id.* (“that’s the signal from the WiFi camera.”).

Also in that claim, Dr. Johnson never identified any structure allegedly corresponding to at least the claimed “encoder.” *See* Ex. 11 at 92-93 [8/31 PM transcript]. Instead, he vaguely referred to his earlier testimony, which as explained above, also failed to identify an “encoder” in the context of other claims.

At that point in his testimony, Dr. Johnson skipped over the remaining elements of claim 9 and jumped to dependent claim 27. The following are the portions of claim 9 he omitted:

a high definition digital output interface configured to transmit the encoded signal to the destination device,

wherein the mobile terminal is configured to transmit the encoded signal to the destination device through a predetermined communication channel in conjunction with a navigational command for the predetermined communication channel;

wherein the predetermined communication channel comprises the high definitional digital output interface; and

wherein the destination device is a digital television.

Ex. 2 at 43:26-35 [‘918 patent].

For the ‘798 patent, claim 1, Dr. Johnson again fails to identify what part of the HAL System allegedly corresponded to the claimed “encoder.” *See* Ex. 11 at 94 [8/31 PM transcript] (“We’ve talked about those elements already as well.”).

Dr. Johnson also does not identify any part of the HAL System that corresponds to the portion of claim 1 that reads “in connection with identification of the centralized hub system based on recognition of the unique hub identifier, the information content carried by a compressed digital video signal.” *See* Ex. 11 at 94 [8/31 PM transcript].

Dr. Johnson does not identify the HAL System’s alleged “high definition digital output interface to accommodate production of the information content on a high definition digital television.” *See* Ex. 11 at 94-95 [8/31 PM transcript].

Because Dr. Johnson failed to provide evidence to the jury that all aspects of the asserted claims were disclosed by the HAL System, it was not possible for the jury to reasonably conclude that Amazon provided invalidity of the asserted claims by clear and convincing evidence.

iii. Amazon Did Not Present Substantial Evidence that the HAL System Renders Obvious Any of the Asserted Claims

With the exceptions of the asserted claims that specially require Zigbee (*i.e.*, ‘983 patent, claim 39, and ‘798 patent, claim 6), Amazon and Dr. Johnson did not proffer any evidence that the asserted claims would have been obvious over the HAL System. *See* Ex. 11 at 100-101 and 107 [8/31 PM transcript]. To the extent that Amazon belatedly attempts to argue that the HAL System renders the non-Zigbee asserted claims obvious, Dr. Johnson failed to identify any recognized reasons for combining the pieces of the HAL System into the system used for Amazon’s invalidity case. There was no valid motivation to combine those products in the way that they were combined. In fact, no motivation was offered at all. Indeed, Dr. Johnson testified that the claims were used as a roadmap to combine the pieces of the system to come up with the HAL System. *See* Ex. 12 at 22-23 [9/1 AM transcript]. Amazon’s and Dr. Johnson’s use of the claims as a roadmap to assemble the HAL System is pure hindsight and cannot form the basis for obviousness. As such, there was not sufficient evidence that a reasonable juror could conclude that the claims are obvious under the clear and convincing evidence standard.

2. Invalidity Conclusion

Amazon did not present clear and convincing evidence that any of the asserted claims were invalid based on the prior art. Amazon entirely failed to prove that the HAL System relied upon by Amazon ever existed before the August 10, 2006 stipulated priority date. Other than Mr. Shriver assembling that system in 2019 at the behest of lawyers, there was no evidence that the HAL System relied upon by Amazon ever existed at all. In fact, Mr. Shriver testified that each system was unique, like a snowflake. *See* Ex. 10 at 53-54 [8/31 AM transcript]. The necessary implication is that no two systems were alike. Any belated suggestion by Amazon that

the HAL System it relied upon was commonly used is belied by the actual evidence.

In addition, even if one assumes that the HAL System existed during the prior art time period (it did not), Dr. Johnson routinely failed to provide evidence that the HAL System disclosed portions and elements of the asserted claims. These omissions are fatal to Amazon's assertions that the claims were either anticipated or rendered obvious by the HAL System.⁴

Finally, Amazon's only other invalidity argument was that the claims failed to satisfy the written description requirement of 35 U.S.C. § 112.⁵ But Amazon's argument and the jury instructions erred by stating that the claims were invalid if they were not supported by the August 10, 2006 or the February 2, 2007 patent applications. *See* Dkt. 845 at 23. That was a wrong statement of the law, and thus, the jury could not have properly concluded that the claims were invalid based on the written description requirement.

Accordingly, Amazon failed to present clear and convincing evidence from which a reasonable jury could conclude that any of the asserted claims were invalid. The Court should enter judgment as a matter of law that Amazon failed to prove invalidity by clear and convincing evidence.

IV. AMAZON OFFERED INSUFFICIENT EVIDENCE THAT THE ASSERTED CLAIMS OF THE '983, '798, OR '918 PATENTS ARE PATENT INELIGIBLE UNDER 35 U.S.C. § 101

A. *Alice* Requires that a Two-Step Test Be Performed To Determine Ineligibility Under 35 U.S.C. § 101

Since patent protection does not extend to claims that monopolize the "building blocks of human ingenuity," claims directed to laws of nature, natural phenomena, and abstract ideas are not patent eligible. *Alice Corp. v. CLS Bank Int'l*, 573 U.S. 208, 216 (2014). The Supreme Court instructs courts to distinguish between claims that set forth patent-ineligible subject matter and those

⁴ The only prior art references Amazon used to try to prove invalidity were the HAL System and the Zigbee specification for the two claims that explicitly recite Zigbee. Amazon used no other prior art.

⁵ The caselaw is not clear as to whether patent ineligibility under 35 U.S.C. § 101 is an invalidity defense or not. But in any event, Innovation deals with patent ineligibility in the following section of this motion.

that “integrate the building blocks into something more.” *Id.* at 217. In doing so, courts apply a two-step test.

First, the court “determine[s] whether the claims at issue are directed to a patent ineligible concept.” *Id.* at 218. This “step of the inquiry calls upon us to look at the ‘focus of the claimed advance over the prior art’ to determine if the claim’s ‘character as a whole’ is directed to excluded subject matter.” *Affinity Labs of Texas, LLC v. DIRECTV, LLC*, 838 F.3d 1253, 1257 (Fed. Cir. 2016). The court must “tread carefully in construing this exclusionary principle” because “[a]t some level, ‘all inventions...embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas.’ ” *Alice*, 573 U.S. at 217 (quoting *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 71 (2012)). The court must distinguish “ineligible abstract-idea-based solutions implemented with generic technical components in a conventional way from the eligible technology-based solution and software-based invention that improves the performance of the computer system itself.” *Amdocs (Israel) Ltd. v. Openet Telecom, Inc.*, 841 F.3d 1288, 1299 (Fed. Cir. 2016) (internal quotations omitted). In doing so, the Court’s analysis must be “directly tethered to the claim language” and should avoid recasting specific limitations “at a high level of abstraction.” *Solutran, Inc. v. Elavon, Inc.*, 931 F.3d 1161, 1168 (Fed. Cir. 2019).

Second, if the challenged claims are directed towards a patent-ineligible concept, the court then “consider[s] the elements of each claim both individually and ‘as an ordered combination’ to determine whether the additional elements ‘transform the nature of the claim’ into a patent eligible application.” *Alice*, 573 U.S. at 217 (quoting *Mayo*, 566 U.S. 66, 78–79 (2012)). This step is satisfied when the claim limitations contain an inventive concept that “involve[s] more than performance of ‘well-understood, routine, [and] conventional activities previously known to the industry.’ ” *Content Extraction & Transmission LLC v. Wells Fargo Bank, Nat’l Ass’n*, 776 F.3d 1343, 1347–48 (Fed. Cir. 2014) (quoting *Alice*, 573 U.S. at 225). The Federal Circuit has explained that “[w]hile the ultimate determination of eligibility under §101 is a question of law, like many legal questions, there can be subsidiary fact questions which must be resolved en route to the ultimate legal determination.” *Aatrix Software, Inc. v. Green Shades Software, Inc.*, 882 F.3d 1121,

1128 (Fed. Cir. 2018). “While patent eligibility is ultimately a question of law . . . [w]hether something is well-understood, routine, and conventional to a skilled artisan at the time of the patent is a factual determination.” *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1369 (Fed. Cir. 2018). This presents a “question of fact” that must be “proven by clear and convincing evidence.” *Id.* at 1368; *see also Aatrix Software*, 882 F.3d at 1128 (“Whether the claim elements or the claimed combination are well-understood, routine, [and] conventional is a question of fact.”).

Something is not necessarily well-understood, routine, and conventional simply because it is disclosed in a prior art reference. *Exergen Corp. v. KAZ USA, Inc.*, 725 F. App’x 959, 965–66 (Fed. Cir. 2018). Specific improvements described in a patent specification, “to the extent they are captured in the claims, create a factual dispute regarding whether the invention describes well-understood, routine, and conventional activities.” *Berkheimer*, 881 F.3d at 1369. The showing necessary to establish that a concept was well-understood, routine, and conventional “goes beyond what was simply known in the prior art” and may not rest on “[t]he mere fact that something is disclosed in a piece of prior art.” *Berkheimer*, 881 F.3d at 1369. “There are many obscure references that may qualify as prior art but are insufficient to establish something is ‘well-understood, routine, and conventional activit[ies] previously engaged in by scientists who work in the field.’” *United Services Automobile Association v. Wells Fargo Bank, N.A.*, 414 F.Supp.3d 947, 952 (E.D. Tex. 2019) (quoting *Mayo*, 566 U.S. at 79).

A patent claim need not invent an entirely new piece of technology. While generic computers used to perform generic computer functions are ineligible, the “non-conventional and non-generic arrangement of known, conventional pieces” can add a sufficiently inventive concept such that the subject matter is patent eligible. *Bascom Global Internet Services, Inc. v. AT & T Mobility LLC*, 827 F.3d 1341, 1350 (Fed. Cir. 2016). “The inventive concept inquiry requires more than recognizing that each claim element, by itself, was known in the art. . . . [A]n inventive concept can be found in the non-conventional and non-generic arrangement of known, conventional pieces.” *Id.*

B. The Two Step *Alice* Test Must Be Performed In Order, Step 1 Before Step 2

Alice requires a two-step process for analysis of patent eligibility. It is not proper to proceed to Step 2 of the *Alice* test without a determination of Step 1. Proceeding to Step 2 analysis presumes that Step 1 has been performed. In fact, it presumes that Step 1 was performed and that an abstract idea was found, because Step 1 is a predicate to performing the *Alice* Step 2 analysis. In order to proceed with an *Alice* Step 2 analysis, there must be a determination of what the abstract idea is in order to compare the patent claims at issue to said abstract idea in considering whether the claims “integrate the building blocks into something more, thereby ‘transform[ing]’ them into a patent-eligible invention.” *Alice*, 134 S.Ct. at 2354. Put simply, in the Step 2 inquiry of whether there is “something more” than the abstract idea, one must first articulate what the abstract idea is. Thus, the jury must be provided with an articulation of what the abstract idea is before attempting any part of an *Alice* Step 2 analysis. An understanding of the abstract idea is required in order to perform the Step 2 requirement of determining whether the claim limitations contain an inventive concept that “involve[s] more than performance of ‘well-understood, routine, [and] conventional activities previously known to the industry.’” *Content Extraction & Transmission LLC v. Wells Fargo Bank, Nat’l Ass’n*, 776 F.3d 1343, 1347–48 (Fed. Cir. 2014) (quoting *Alice*, 573 U.S. at 225).

C. Amazon Failed to Identify or Even Allege an Abstract Idea Representing the Claims, Let Alone Perform a Claim-by-Claim Analysis

Over Innovation’s objection, the Court improperly submitted to the jury the *Alice* Step 2 fact questions as set forth in *Berkheimer*. See Ex. 14 at 201 [9/2 AM transcript]. This was improper because Amazon never identified or articulated any abstract idea for the jury to consider in its *Alice* Step 2 analysis. Amazon presented no evidence on what the idea is that may be abstract, nor any evidence on whether the idea is abstract. This failure caused the evidence of record to be insufficient for a reasonable jury to decide Step 2. Amazon was required to perform a claim-by-claim analysis for each of the asserted claims and identify an abstract idea covered by each of the claims. No evidence of an abstract idea for each claim was submitted by Amazon. In fact, because Amazon’s expert Dr. Johnson, never presented such a claim-by-claim analysis in

his expert report, the Court precluded such testimony at trial. *See* Ex. 10 at 17-18 [8/31 AM transcript].

D. Amazon Presented No Evidence for a Reasonable Jury to Find That Each Individual Element Let Alone the Ordered Combination of Elements are Well-Known for Each Claim

Alice Step 2 requires a determination of whether each and every element and also the ordered combination of elements meets all three requirements of *Alice* Step 2 -- well-known, routine and conventional.

Amazon had the burden of proving that each and every element of each claim alone, or as an ordered combination was well-known. Amazon failed to present evidence that any of the asserted claims (which must be read as a whole) were directed to one or more abstract ideas and, if so, whether any of the claims lacked an inventive concept. These two questions required evidence from one skilled in the art. No such evidence was ever provided. Amazon's technical expert witness, Dr. Johnson, never identified any alleged abstract idea for any of the asserted claims. Nor did Dr. Johnson explain why the asserted claims lacked an inventive concept when the elements of the claims are considered individually and as an ordered combination. *See* Ex. 10 at 81-84 and 86-117 [8/31 AM transcript].

The only testimony Dr. Johnson provided was to give his opinion that concepts (not claim limitations) from certain claims were well-known and conventional. *Id.* Those concepts included diaper monitors, sensors, smart home technology, video compression/decompression, wireless networking, and wireless hubs. These concepts are not the claim elements individually or the claimed invention as a whole. Amazon presented zero evidence to support *Alice* Step 1.

As for *Alice* Step 2, Dr. Johnson's testimony that certain concepts were well-known and conventional is not enough to prevail on *Alice* Step 2. If Innovation demonstrated that the claim limitations "involve more than performance of well-understood, routine, [and] conventional activities previously known to the industry," that would have satisfied *Alice* Step 2. But the corollary is not true. Showing that the claim limitations are well-known, routine and conventional does not necessarily show that the claims lack an inventive step. But even if it did,

Amazon never presented any evidence that the claims limitations, considered individually and as an ordered combination, lacked an inventive step.

Moreover, Amazon never presented evidence that each of the claim elements were routine. “The second step of the *Alice* test is satisfied when the claim limitations ‘involve more than performance of well-understood, routine, [and] conventional activities previously known to the industry.’” *Berkheimer*, 881 F.3d at 1367. Thus, there are three separate requirements for satisfying the second step of *Alice*. The patentee must show that the claim limitations or ordered combination is more than subject matter which is (1) well understood, (2) routine, and (3) conventional. But when Dr. Johnson testified about the individual concepts (not the claim limitations), he only testified that they were well-known or conventional. *See* Ex. 10 at 81-84 and 86-117 [8/31 AM transcript]. He did not explain how those concepts were “routine.”

There was insufficient evidence introduced for a reasonable jury to find that the elements and the ordered combination of elements are well-known. Amazon failed to enter sufficient evidence enabling a jury to find any one claim “well-known.” With regard to a finding of a claim as “well-known,” no element-by-element analysis was performed by Amazon’s expert and entered in the record and no ordered combination analysis was performed by Amazon’s expert and entered in the record. The trial record demonstrates that the only evidence on the patent claims were directed to “well known” subject matter was Dr. Johnson’s testimony on August 31, 2020 and none of this was presented on a claim-by-claim, element-by element basis as required. *See* Ex. 10 at 64, 81-117 [8/31 AM transcript]. Thus, there was insufficient evidence for a reasonable jury to find that each of the claims involves nothing more than performance or existence of “well known” activities or subject matter known to the industry.

E. Amazon Presented No Evidence for a Reasonable Jury to Find That Each Individual Element Let Alone The Ordered Combination of Elements Are Routine for Each Claim

Amazon had the burden of proving that each and every element, as well as the ordered combination of elements, of each claim are routine. There was insufficient evidence introduced for a reasonable jury to find that the elements and the ordered combination of elements are

routine. Amazon failed to submit sufficient evidence enabling a jury to find any one claim “routine.” With regard to a finding of a “routine” claim, no element-by-element analysis nor ordered combination analysis was performed by Amazon’s expert. The trial record demonstrates that the only evidence on the patent claims were directed to “routine” subject matter was Dr. Johnson’s testimony on August 31, 2020 and none of this was presented on a claim-by-claim, element-by element basis as required. *See* Ex. 10 at 64:5-12; 83:12; 99:12-21; 113:23-114:7; 116:15-117:10 [8/31 AM transcript]. Thus, there was insufficient evidence for a reasonable jury to find each of the claims involve nothing more than “routine” activities or subject matter previously known to the industry.

F. Amazon Presented No Evidence for a Reasonable Jury to Find That Each Individual Element Let Alone the Ordered Combination of Elements are Conventional for Each Claim

Amazon had the burden of proving that each and every element, as well as the ordered combination elements, of each claim were conventional. Amazon presented no evidence for a reasonable jury to find that the elements and the ordered combination of elements are conventional. Amazon failed to enter sufficient evidence enabling a jury to find any one claim “conventional.” With regard to a finding of conventionality, no element-by-element analysis and no ordered combination analysis was performed by Amazon’s expert. With no such evidence, no reasonable jury could find that each individual element, let alone the ordered combination of elements, are directed to merely “conventional” subject matter known to the industry. The trial record demonstrates that the only evidence on the patent claims were directed to “conventional” subject matter was Dr. Johnson’s testimony on August 31, 2020 and none of this was presented on a claim-by-claim, element-by element basis as required. *See* Ex. 10 at 64, 81-117 [8/31 AM transcript]. Thus, there is insufficient evidence for a reasonable jury to find each of the claims involve nothing more than “conventional” activities or subject matter known to the industry.

G. Amazon Presented No Evidence of a Lack of Inventive Concept or Something “Significantly More” Than An Abstract Idea for Each Claim

Amazon failed to introduce evidence showing the lack of an “inventive concept” or

something “significantly more” than the unarticulated abstract idea in each claim. This evidence is necessary for the jury to properly perform an *Alice* Step 2 analysis. For each claim, Step 2 of the *Alice* test requires an analysis of whether something “significantly more” exists in each claim. It was Amazon’s burden to introduce evidence for each claim to show that there is not an “inventive concept” or something “significantly more” beyond the abstract idea and beyond merely well-known, routine, and conventional subject matter for those portions of each claim. At a minimum, Amazon should have articulated, and the Court should have found what the abstract idea was, so that Innovation could have presented evidence of the inventive concept beyond that unarticulated and unfound abstract idea. As such, the trial record is devoid of evidence for a reasonable jury to find that each claim was directed to well known, routine, and conventional subject matter lacking an “inventive concept” or something “significantly more” than an abstract idea.

The final judgment entered by the Court was limited to the fact question decided by the jury. *See* Dkt. 897 at ¶ 3. The legal issues in *Alice* Steps 1 and 2 were not part of the judgment. Consequently, Innovation limits its motion with respect to patent eligibility to the fact question decided by the jury and included in the final judgment. Specifically, Innovation asks the Court to enter judgment as a matter of law that Amazon failed to prove that the asserted claims were each well-understood, routine, and conventional as of the time of the asserted patents.

V. INNOVATION IS ENTITLED TO A JUDGMENT AS A MATTER OF LAW THAT AMAZON’S PRODUCTS INFRINGE

Based on the evidence presented to the jury, Innovation is entitled to a judgment as a matter of law that Amazon’s accused products infringe each of the patents-in-suit. Based on the evidence, no reasonable jury could have found that Amazon’s accused products did not infringe.

A. Innovation’s Affirmative Case of Infringement Was Substantial and Detailed

Innovation’s affirmative case of infringement by Amazon’s accused products was fully supported by detailed evidence and extensively analyzed by Innovation’s technical expert, Mr. McAlexander. Mr. McAlexander showed how each of the accused products infringed each of

the asserted claims on a claim-by-claim and element-by-element basis. *See* Ex. 4 at 122-145 [8/25 AM transcript]; Ex. 5 at 4-143 [8/25 PM transcript]; Ex. 6 at 5-17 [8/26 AM transcript]. The detailed nature of Mr. McAlexander’s infringement testimony (supported by dozens of documentary exhibits) stands in stark contrast to Dr. Johnson’s very general, hand-waving testimony on invalidity. At the conclusion of Mr. McAlexander’s infringement testimony, no reasonable jury could have concluded that Mr. McAlexander and Innovation had not presented a substantial infringement case.

B. Innovation Successfully Disproved Amazon’s “Hub” Non-Infringement Argument

There was no dispute that the Echo Plus, Echo Plus 2, and Show 2 constituted a wireless hub. Each of those products included a Zigbee chip that facilitated a wireless hub. Dr. Johnson did not contest that issue. *See* Ex. 12 at 8 [9/1 AM transcript].

In addition, there was never a finding that the preamble which includes the “wireless HUB” claim language was limiting. *See Altiris, Inc. v. Symantec Corp.*, 318 F.3d 1363, 1371 (Fed. Cir. 2003). But, even if it was limiting, there was testimony that the other accused products constituted a wireless hub. *See* Ex. 13 at 90-91 [9/1 PM transcript].

C. Amazon’s “Two Interface” Argument Was Wholly Contrived

Certain claims such as claim 22 of the ‘983 patent recite “an input interface” and “a network interface.” Dr. Johnson (Amazon’s expert) testified that these claims required two separate interfaces to satisfy the claim language. *See* Ex. 10 at 124-125 [8/31 AM transcript]. But there has been no ruling that the claims require that those claim elements have to be separate structures. *See Google LLC v. Personal Audio, LLC*, 743 Fed. Appx. 978 (Fed. Cir. 2018) (*citing Powell v. Home Depot U.S.A., Inc.*, 663 F.3d 1221, 1230-31 (Fed. Cir. 2012); *Linear Tech. Corp. v. ITC*, 566 F.3d 1049, 1055 (Fed. Cir. 2009); *Rodime plc v. Seagate Tech., Inc.*, 174 F.3d 1294, 1305 (Fed. Cir. 1999); *see also Mobile Telecommunications Techs. LLC v. Google Inc.*, 2016 WL 7338398 at *9 (E.D. Tex. Dec. 12, 2016). Moreover, Mr. McAlexander testified that these claim elements were mapped to two different (but overlapping) structures. *See* Ex. 13 at 91-94

[9/1 PM transcript].

D. Amazon’s “Updated Status” Argument Was A Misreading of the Claims

Amazon also argued that its accused products did not infringe because they did not satisfy the “updated status of the item” claim element. For example, referring to claim 22 of the ‘983 patent, Amazon argued that its accused products did not satisfy the element reading “wherein the wireless HUB system is further configured to communicate ... information for managing an item status of an item in connection with a short-range wireless communication regarding an updated status of the item.” Dr. Johnson (Amazon’s technical expert) testified that this claim language required the communication of information based on an event that occurred in the past. The Court construed “updated status of the item” to mean “change in item status.” There was nothing about the claim language as construed by the Court that required the claim to only apply to communication of information relating to a past event. Nevertheless, Dr. Johnson testified that a communication relating to a past event was required for infringement. *See* Ex. 10 at 137 [8/31 AM transcript].⁶ But even under Amazon’s and Dr. Johnson’s incorrect reading of the claim language, Mr. McAlexander testified that the accused products satisfied the claims. *See* Ex. 7 at 18-21 [8/26 PM transcript]. This was not disputed by Amazon. Indeed, Amazon did not cross-examine Mr. McAlexander on this issue, and this alternative read is therefore undisputed.

One reason for Amazon’s failure to challenge Mr. McAlexander’s testimony in this regard may be that Amazon realized they could not do so without torpedoing its own invalidity case. Amazon’s expert, Dr. Johnson, testified that the so-called HAL System built by Mr. Shriver in 2019 and subsequently tested by Dr. Johnson, satisfies the “updated status of the item” claim element through its use of a video camera to detect motion and later sending a notification that motion was detected. *See* Ex. 11 at 75 [8/31 PM transcript]. Similarly, Mr. McAlexander

⁶ Dr. Johnson gave this testimony even though the Court had previously excluded those opinions from the case because they were not included in Dr. Johnson’s expert report. *See* Ex. 10 at 139-146 [8/31 AM transcript].

testified that the accused products can be connected to a Ring video doorbell that can detect motion so that the accused products later send a notification that motion was detected. *See* Ex. 7 at 18-21 (specifically 20:22-21:18) [8/26 PM transcript]. Therefore, no valid dispute exists as to whether this motion detection scenario implemented by the accused products meets the “updated status of the item” claim element.

E. Infringement Conclusion

Infringement must be proven under the preponderance of evidence standard. Under that standard and a proper understanding of the claims as construed by the Court, no reasonable juror could have concluded that the Amazon accused products did not infringe.

VI. ADDITIONAL EVIDENTIARY ISSUES

A. The Court Erred in Allowing the Testimony of Timothy C. Shriver

Amazon subpoenaed documents and things from cooperative third-party, Home Automated Living CEO Timothy C. Shriver, asking for “A HAL2000 system with the HAL Digital Video Center and/or HAL Digital Music Center add-ons as it would have existed on or before August 9, 2006”. *See* Ex. 10 at 50-52 [8/31 AM transcript]. In September 2019, Shriver searched his home and office and other sources for components of 2006 vintage. He constructed a system with the vintage components he could locate (supplemented with new components where vintage components could not be located), tested that system, disassembled it, labelled it, and sent it to HTC’s counsel’s office in California. The system was reassembled there, and Amazon now refers to this 2019 creation as the “HAL System” a/k/a “HAL2000 System.” *Id.* at 52-53. Amazon asserted that the HAL System is prior art that invalidates Innovation’s patents.

Amazon presented the trial testimony of Timothy C. Shriver, CEO of Home Automated Living by video on August 31, 2020. Innovation objected to certain portions of Mr. Shriver’s testimony as not being based on his personal knowledge, providing undisclosed expert testimony under the guise of lay opinions, and being more prejudicial than probative of any fact at issue. *See* Ex. 8 at 1-18 [8/28 AM transcript]; Ex. 9 at 173-185 [8/28 PM corrected transcript]; Ex. 15

[8/29 Letter Brief].⁷ The Court allowed the testimony over Innovation's objections, ruling:

Plaintiffs objections to Mr. Shriver's deposition are overruled. Plaintiff makes several arguments against admission. First, Plaintiff asserts that Mr. Shriver had no personal knowledge. Plaintiffs argument is really an argument about the weight the testimony should be given and does not go to admissibility. Plaintiff points out that Mr. Shriver is less than certain as to whether the HAL System existed in the exact configuration necessary. But the fact that Mr. Shriver cast doubt on whether his company produced a HAL System with the relevant specifications for this case is a fact issue for the jury. The jury decides what constitutes prior art and whether it anticipates/renderers obvious. Second, Plaintiff asserts that Mr. Shriver's testimony is improper expert testimony. Mr. Shriver founded a small company in the 1990s that produced these HAL Systems. Mr. Shriver is testifying as to his personal knowledge about (sic) whether his company did a certain thing or whether his company's (sic) main product could perform a certain task. This is similar to the testimony that we heard from Fred Torok. Mr. Shriver's (sic) testimony seems more akin to Mr. Torok's (sic) testimony than to Mr. McAlexander's (sic) testimony. Finally, Plaintiff raises Rule 403. Plaintiff does not explain why there would be any specific unfair prejudice. Plaintiffs letter brief merely argues as to the weight of the evidence.

Ex. 16, August 30, 2020 e-mail Order.

Briefing the issue during trial, Amazon relied on *Meyer Intellectual Props. Ltd. v. Bodum, Inc.*, 690 F.3d 1354, 1376-78 (Fed. Cir. 2012) for the proposition that it is an abuse of discretion to preclude a witness from testifying i) regarding his personal knowledge of prior art systems; ii) where there is no risk of admitting expert opinion testimony on invalidity. Ex. 18, [Amazon 8/27/20 Letter Brief]. Mr. Shriver's testimony fails on both counts. First, Shriver demonstrably lacked personal knowledge that the actual 2019-constructed HAL System existed anywhere before August 10, 2006. Whether a witness has personal knowledge of the matters on which the witness will testify is a threshold admissibility question under Fed. R. Evid. 602 and does not merely go to the weight of the evidence. The Court's above-quoted ruling that

⁷ Innovation also filed a Motion *in Limine* on the issue to exclude lay opinion testimony, which was denied in favor of objecting at trial. See Ex. 17 at 59:2-8 [Final Pretrial Conference].

Innovation's "argument is really an argument about the weight the testimony should be given and does not go to admissibility" is clear error. Second, Shriver's testimony amounted to expert opinion testimony on invalidity from an undisclosed "expert" giving lay opinion testimony that violated Fed. R. Civ. P. 26(a)(2)(A) and was inadmissible under Fed. R. Evid. 701. Allowing such testimony was prejudicial to Innovation and constitutes reversible error.

1. The Court Erred in Allowing the Testimony of Timothy C. Shriver Because He Lacked Personal Knowledge of the Existence of any Pre-August 10, 2006 HAL System Configured the Same as the 2019-Constructed HAL System

As noted above, in *Meyer Intellectual Props. Ltd. v. Bodum, Inc.*, the Federal Circuit held it is an abuse of discretion to preclude a witness from testifying regarding his personal knowledge of prior art systems. Here, Mr. Shriver's testimony is distinguishable from that in *Meyer*. In *Meyer*, the proffered oral testimony was corroborated by contemporaneous documentary evidence from the prior art period. *Meyer*, 690 F.3d at 1377 ("To corroborate Jorgen's testimony, Bodum intended to offer drawings of the carafe and pages from its catalogs—all of which *predated the patents-in-suit.*") (emphasis added). In contrast, Amazon did not and could not proffer a pre-August 10, 2006 HAL System to corroborate Shriver's testimony because Shriver testified that each system constructed in the pre-August 10, 2006 prior art period was "unique ... like a snowflake," that his company Home Automated Living only "would sell the software and the customer would configure it" in the pre-August 10, 2006 prior art period, that Home Automated Living was not "selling turnkey systems" such as the 2019-constructed HAL System in that time period, that he "wouldn't always know what customers' end use was when they bought [Home Automated Living's] software" in that period, and that he "wouldn't know whether a customer would have set up a system like [the 2019-constructed HAL System] on August 9th of 2006" Ex. 10 at 53-56 [8/31/20 AM Session]. Based on this testimony, Mr. Shriver clearly did not have personal knowledge of the existence of any HAL System matching Amazon's 2019-constructed HAL System in the pre-August 10, 2006 prior art period.

Fed. R. Evid. 602 provides that “[a] witness may testify to a matter only if evidence is introduced sufficient to support a finding that the witness has personal knowledge of the matter. Evidence to prove personal knowledge may consist of the witness’s own testimony. This rule does not apply to a witness’s expert testimony under Rule 703.” Given Shriver’s own testimony showing that he had no personal knowledge of the existence of any pre-August 10, 2006 HAL System configured the same as the 2019- constructed HAL System, Shriver’s testimony is distinguishable from the excluded testimony in *Meyer* and was inadmissible under Fed. R. Evid. 602.

Moreover, Shriver’s testimony that a HAL System “could have and would have” operated a certain way in the pre-August 10, 2006 prior art period was pure speculation given that he could not testify to the actual existence of any such system in that time period.

Mr. Shriver’s testimony was inadmissible. Innovation is entitled to a new trial pursuant to Fed. R. Evid. 59(a).

2. Testimony that the 2019 “HAL System” “Could Have and Would Have” Operated a Certain Way are Inadmissible Lay Opinions that Risk Admitting Expert Opinion Testimony on Invalidity

The error in allowing Mr. Shriver’s testimony is compounded by the fact that the testimony consisted of lay opinions on the existence and functionality of prior art. In Shriver’s trial testimony, allowed over Innovation’s objections, Shriver repeatedly opined as to how a purported pre-August 10, 2006 HAL System (a system he admitted he never saw) “could have and would have” operated. Such opinions are the realm of expert testimony, but Amazon did not disclose Shriver as an expert witness. The Court erred in allowing such testimony because it was fraught with the “risk of admitting expert opinion testimony on invalidity” warned about in *Meyer*. Such risk came to fruition when the Court admitted such expert opinion testimony on invalidity through lay witness Shriver.

Mr. Shriver was a lay witness who was not disclosed as an expert by Amazon in this case (or any related case) under Fed. R. Civ. P. 26(a)(2)(A) (“In addition to the disclosures required by Rule 26(a)(1), a party must disclose to the other parties the identity of any witness it may use

at trial to present evidence under Federal Rule of Evidence 702, 703, or 705”). As such, any opinion testimony from Shriver was subject to Fed. R. Evid 701, which states:

If a witness is not testifying as an expert, testimony in the form of an opinion is limited to one that is:
 (a) rationally based on the witness’s perception;
 (b) helpful to clearly understanding the witness’s testimony or to determining a fact in issue; and
 (c) not based on scientific, technical, or other specialized knowledge within the scope of Rule 702.

Fed. R. Evid. 701. Here, Mr. Shriver’s opinions about whether a HAL System from the pre-August 10, 2006 prior art period “could have” or “would have” been able to perform certain functions as expressed at trial (Ex. 10, 8/31/20 AM at 38:14-17, 43:10-14, 44:14-18, 47:2-6) could not have been “rationally based on the witness’s perception” – Mr. Shriver never saw or perceived such a system prior to August 10, 2006 as set forth above. Moreover, Mr. Shriver’s opinions are clearly “based on scientific, technical, or other specialized knowledge within the scope of Rule 702” given his role in inventing HAL. Mr. Shriver’s lay opinion testimony did not meet Fed. R. Evid. 701(a) or (c) and should have been excluded. Such clearly expert testimony should not have been admitted under the guise of lay opinions. Further, allowing Mr. Shriver’s lay opinion testimony usurped the fact-finding function of the jury. It is the jury, not Mr. Shriver, who has the final say on whether the so-called HAL System could have and would have existed in 2006.

3. **The Prejudice Created by Admitting Shriver’s Testimony on the 2019 “HAL System” Outweighs any Probative Value**

Amazon presented Shriver’s testimony on the HAL System in support of its invalidity argument that the HAL System anticipated some or all of the claims Innovation asserted at trial. But as explained in detail above, Mr. Shriver had no personal knowledge that a system like the 2019-constructed HAL System ever existed in the pre-August 10, 2006 prior art period. Notably, Mr. Shriver testified that he does not know “whether a customer would have set up a system like [the 2019-constructed HAL System] on August 9th of 2006.” Ex. 10 at 55-56

[8/31/20 AM Session]. In order to establish anticipation, Amazon was required to prove by clear and convincing evidence that the HAL System met each of every limitation of the asserted claims, and that the HAL System existed prior to August 10, 2006. Amazon could not meet that burden without Shriver testimony that lacked the personal knowledge foundation required by Fed. R. Evid. 602 and that was expert testimony under the guise of lay opinion in violation of Fed. R. Evid. 701. Such testimony was clearly inadmissible. Because the HAL System was the only prior art relied on by Amazon at trial, admission of the inadmissible testimony prejudiced Innovation. Even if Mr. Shriver had recalled such a system, uncorroborated testimony is insufficient to establish the existence of prior art under controlling precedent. *The Barbed Wire Patent*, 143 U.S. 275 (1892).

Allowing Shriver's inadmissible testimony when it was otherwise impossible for Amazon to meet its burden of proving invalidity by clear and convincing evidence was prejudicial and the prejudice outweighed any probative value. Accordingly, under Fed. R. Evid. 403, 602, and 701, Mr. Shriver's testimony should have been excluded.

B. The “Demonstrative” HAL Videos Should Not Have Been Played to the Jury

During trial, the parties heatedly disputed whether the “demonstrative” videos showing the HAL System should have been played for the jury. The reasons for excluding those videos were presented to the Court on multiple occasions and Innovation incorporates by reference all of its arguments why the videos should not have been played for the jury herein. Those arguments are included in the trial testimony excerpts attached to this motion. *See* Ex. 10 at 3-20 and 84-86 [8/31 AM transcript]; Ex. 4 at 3:3-8:19 [8/25 AM transcript].

VII. THE COURT SHOULD ENTER JUDGMENT AS A MATTER OF LAW ADDING THE ADDITIONAL AMAZON ENTITIES

Out of an abundance of caution and to ensure this issue is preserved for appeal, Innovation again asks that the Court enter judgment that the Amazon defendants include Amazon Digital Service, Inc., Amazon Digital Services, LLC, Amazon Web Services LLC, and Amazon Fulfillment Services, Inc. The reasons for adding these entities to the judgment in this

case are set forth in Innovation's opposition and surreply to Amazon's motion for entry of judgment. *See* Dkts. 890 and 893. Innovation's arguments as to why those additional Amazon entities should be included in the judgment are set forth in Innovation's opposition and surreply which are wholly incorporated by reference as if set forth fully herein.

VIII. IF THE COURT DOES NOT ENTER JUDGMENT AS A MATTER OF LAW, THE COURT SHOULD ORDER A NEW TRIAL

As alternative relief to Innovation's motion for entry of judgment as a matter of law, Innovation asks the Court to order a new trial pursuant to Federal Rule of Civil Procedure 59(a) on any issue(s) for which it does not enter judgment as a matter of law in favor of Innovation. The reasons for a new trial are the same as those provided above in support of Innovation's motion for judgment as a matter of law pursuant to Federal Rule of Civil Procedure 50(b).

IX. CONCLUSION

For the reasons provided above, Innovation respectfully requests the Court enter judgment as a matter of law as requested. Alternatively, Innovation requests that the Court grant Innovation's motion for a new trial.

Dated: March 26, 2021

Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that all counsel of record who are deemed to have consented to electronic service are being served with a copy of this document via the Court's CM/ECF system per Local Rule CV-5(a)(3).

DATED: March 26, 2021

/s/ Donald L. Jackson
Donald L. Jackson